

Amendments to the Claims:

Please amend the claims to read as follows:

1. (Currently amended) A method for allocating a network resource to a data path associated with a data packet flow and having a predetermined priority, the method comprising:

selecting a network path having sufficient network resource available; allocating the network resource to the data path when the selected network path has an acceptable cost; and

evaluating one or more network paths between a source and a destination until one network path is found with sufficient unused network resource available for supporting the data packet flow of the data path and with at most an acceptable maximum number of hops, or until no such network path is found;

if one network path is found with sufficient unused network resource available for supporting the data packet flow of the data path and with at most an acceptable maximum number of hops, configuring the data path on the one network path and allocating a sufficient portion of the unused network resource to the data path to support the data packet flow associated therewith; and

if no network path is found with sufficient unused network resource available for supporting the data packet flow of the data path and with at most an acceptable maximum number of hops, selecting a network path between the source and the destination, configuring the data path on the selected network path, and taking network resource from an existing data path on the selected network path having a priority lower than the predetermined priority of the data path in order to

allocate sufficient network resource to the data path to support the data packet flow associated therewith when no network path having sufficient network resource and acceptable cost is selected.

2. (Original) The method of claim 1, wherein the network resource comprises bandwidth.
- 3-4. (Canceled)
5. (Currently amended) The method of claim 1, wherein the cost a number of hops for a given network path is obtained by reference to a topology database for determining a path between a the source and a the destination.
- 6-7. (Canceled)
8. (Original) The method of claim 1, wherein the data path comprises a label switched path (LSP) on a multiprotocol label switching (MPLS) network.
- 9-12. (Canceled)
13. (Currently amended) A method of configuring a label switched path (LSP) through a multiprotocol label switching (MPLS) network, the LSP having an associated data packet flow and a predetermined priority, the method comprising:

selecting a network path in the MPLS having sufficient network resource available; allocating the network resource to the LSP when the selected network path has an acceptable cost; and  
evaluating one or more network paths in the MPLS network between a source and a destination until one network path is found with

sufficient unused network resource available for supporting the data packet flow of the LSP and with at most an acceptable maximum number of hops, or until no such network path is found;

if one network path in the MPLS network is found with sufficient unused network resource available for supporting the data packet flow of the LSP and with at most an acceptable maximum number of hops, configuring the LSP on the one network path and allocating a sufficient portion of the unused network resource to the LSP to support the data packet flow associated therewith; and

if no network path in the MPLS network is found with sufficient unused network resource available for supporting the data packet flow of the LSP and with at most an acceptable maximum number of hops, selects a network path between the source and the destination, configures the LSP on the selected network path, and taking network resource from an existing LSP on the selected network path having a priority lower than the predetermined priority of the LSP in order to allocate sufficient network resource to the LSP to support the data packet flow associated therewith when no network path having sufficient network resource and acceptable cost is selected.

14. (Currently amended) The method of claim 13, wherein the cost a number of hops for a given network path is obtained by reference to a topology database for determining a path between a the source and a the destination.

15-19. (Canceled)

20. (Currently amended) A computer program stored on a computer-readable medium for allocating a network resource to a data path

associated with a data packet flow and having a predetermined priority,  
the computer program comprising instructions that cause a processor to:

~~select a network path having sufficient network resource available;~~  
~~allocate the network resource to the data path when the selected~~  
~~network path has an acceptable cost; and~~

evaluate one or more network paths between a source and a  
destination until one network path is found with sufficient unused  
network resource available for supporting the data packet flow of the  
data path and with at most an acceptable maximum number of hops, or  
until no such network path is found;

if one network path is found with sufficient unused network  
resource available for supporting the data packet flow of the data path  
and with at most an acceptable maximum number of hops, configure the  
data path on the one network path and allocate a sufficient portion of the  
unused network resource to the data path to support the data packet  
flow associated therewith; and

if no network path is found with sufficient unused network  
resource available for supporting the data packet flow of the data path  
and with at most an acceptable maximum number of hops, select a  
network path between the source and the destination, configure the data  
path on the selected network path, and take network resource from  
another data path on the selected network path having a priority lower  
than the predetermined priority of the data path in order to allocate  
sufficient network resource to the data path to support the data packet  
flow associated therewith when no network path having sufficient  
network resource and acceptable cost is selected.

21. (Original) The computer program of claim 20, wherein the network resource comprises bandwidth.

22-23. (Canceled)

24. (Currently amended) The computer program of claim 20, wherein the cost a number of hops for a given network path is obtained by reference to a topology database for determining a path between a the source and a the destination.

25-26. (Canceled)

27. (Original) The computer program of claim 20, wherein the data path comprises a label switched path (LSP) on a multiprotocol label switching (MPLS) network.

28-31. (Canceled)

32. (Currently amended) A computer program stored on a computer-readable medium for configuring a label switched path (LSP) through a multiprotocol label switching (MPLS) network, the LSP having an associated data packet flow and a predetermined priority, the computer program comprising instructions that cause a processor to:

select a network path in the MPLS having sufficient network resource available; allocate the network resource to the LSP when the selected network path has an acceptable cost; and

evaluate one or more network paths in the MPLS network between a source and a destination until one network path is found with sufficient unused network resource available for supporting the data

packet flow of the LSP and with at most an acceptable maximum number of hops, or until no such network path is found;

if one network path in the MPLS network is found with sufficient unused network resource available for supporting the data packet flow of the LSP and with at most an acceptable maximum number of hops, configure the LSP on the one network path and allocate a sufficient portion of the unused network resource to the LSP to support the data packet flow associated therewith; and

if no network path in the MPLS network is found with sufficient unused network resource available for supporting the data packet flow of the LSP and with at most an acceptable maximum number of hops, select a network path between the source and the destination, configure the LSP on the selected network path, and take network resource from an existing LSP on the selected network path having a priority lower than the predetermined priority of the LSP in order to allocate sufficient network resource to the LSP to support the data packet flow associated therewith when no network path having sufficient network resource and acceptable cost is selected.

33. (Currently amended) The computer program of claim 32, wherein the cost a number of hops for a given network path is obtained by reference to a topology database for determining a path between a- the source and a the destination.

34-38. (Canceled)

39. (Currently amended) An apparatus for allocating a network resource to a data path associated with a data packet flow and having a predetermined priority, the apparatus comprising circuitry which:

selects a network path having sufficient network resource available; allocating the network resource to the data path when the selected network path has an acceptable cost; and

evaluates one or more network paths between a source and a destination until one network path is found with sufficient unused network resource available for supporting the data packet flow of the data path and with at most an acceptable maximum number of hops, or until no such network path is found;

if one network path is found with sufficient unused network resource available for supporting the data packet flow of the data path and with at most an acceptable maximum number of hops, configures the data path on the one network path and allocates a sufficient portion of the unused network resource to the data path to support the data packet flow associated therewith; and

if no network path is found with sufficient unused network resource available for supporting the data packet flow of the data path and with at most an acceptable maximum number of hops, selects one of the network paths, configures the data path on the selected network path, and takes network resource from an existing data path on the selected network path having a priority lower than the predetermined priority of the data path in order to allocate sufficient network resource to the data path to support the data packet flow associated therewith when no network path having sufficient network resource and acceptable cost is selected.

40. (Original) The apparatus of claim 39, wherein the network resource comprises bandwidth.

41-42. (Canceled)

43. (Currently amended) The apparatus of claim 39, wherein the least a number of hops for a given network path is obtained by reference to a topology database for determining a path between the source and the destination.

44-45. (Canceled)

46. (Original) The apparatus of claim 39, wherein the data path comprises a label switched path (LSP) on a multiprotocol label switching (MPLS) network.

47-50. (Canceled)

51. (Original) The apparatus of claim 39, wherein the circuitry comprises a memory which stores computer instructions and a processor which executes the computer instructions.

52. (Original) The apparatus of claim 39, wherein the circuitry comprises one or more of an integrated circuit and programmable logic.

53. (Currently amended) An apparatus for configuring a label switched path (LSP) through a multiprotocol label switching (MPLS) network, the LSP having with an associated data packet flow and a predetermined priority, the apparatus comprising circuitry which:

selects a network path in the MPLS having sufficient network resource available; allocates the network resource to the LSP when the selected network path has an acceptable cost; and

evaluates one or more network paths in the MPLS network between a source and a destination until one network path is found with sufficient unused network resource available for supporting the data packet flow of the LSP and with at most an acceptable maximum number of hops, or until no such network path is found;

if one network path in the MPLS network is found with sufficient unused network resource available for supporting the data packet flow of the LSP and with at most an acceptable maximum number of hops, configures the LSP on the one network path and allocates a sufficient portion of the unused network resource to the LSP to support the data packet flow associated therewith; and

if no network path in the MPLS network is found with sufficient unused network resource available for supporting the data packet flow of the LSP and with at most an acceptable maximum number of hops, selects a network path between the source and the destination, configures the LSP on the selected network path, and takes network resource from an existing LSP on that selected network path having a priority lower than the predetermined priority of the LSP in order to allocate sufficient network resource to the LSP to support the data

packet flow associated therewith when no network path having sufficient network resourcee and acceptable cost is selected.

54. (Currently amended) The apparatus of claim 53, wherein the cost a number of hops for the selected network path is obtained by reference to a topology database for determining a path between the a-source and a the destination.

55-59. (Canceled)